

Amendments to the Claims:

The following listing of claims, in which deleted matter is either struck-through or enclosed in double brackets, and added material (except for newly presented claims) is underlined, replaces all prior versions and listings of claims in this application.

1. (Previously Presented) A timing element comprising a delay composition wherein the delay composition comprises a solid core of cross-linked reactive polymeric material and, optionally, one or both of a fuel component and an oxidizer component dispersed within the solid core of the reactive polymeric material, the reactive polymeric material being enclosed in a sheath.
2. (Previously Presented) The timing element of claim 1 wherein the reactive polymeric material comprises a GAP material.
3. (Previously Presented) The timing element of claim 2 wherein the reactive polymeric material comprises a cross-linked GAP acrylic material.
4. (Previously Presented) The timing element of claim 2 wherein the reactive polymeric material comprises a cross-linked GAP urethane material.
5. (Previously Presented) The timing element of claim 2 wherein the oxidizer component is present as a pulverulent oxidizer material.
6. (Currently Amended) The timing element of claim 5 wherein the oxidizer material component comprises about 0.25% to about 10% of the delay composition, by weight.
7. (Previously Presented) The timing element of claim 2 or claim 5 wherein the fuel component is present as a pulverulent fuel in an amount of about 0.25 to about 2% of the delay composition, by weight.

8. (Previously Presented) The timing element of claim 7 wherein the pulverulent fuel comprises about 1 percent of the delay composition, by weight.

9. (Previously Presented) The timing element of claim 1 or claim 2 wherein the sheath comprises one or more of polyacrylonitriles, polybutadiene, polystyrene, ABS copolymer, polyphenylene oxide, polysulfone, cellulose acetate butyrate, and modified ethylene acrylate polymeric material.

10. (Previously Presented) A method for making a timing element, comprising disposing a curable precursor resin of a reactive polymeric material in a sheath, the resin optionally having one or both of a fuel component and an oxidizer component, and then cross-linking the curable precursor resin to form a solid core of cross-linked reactive polymeric material in the sleeve.

11. (Previously Presented) The method of claim 10 wherein the sleeve comprises a polymeric material, the method comprising injecting the curable precursor resin into a sleeve under pressure sufficient to expand the diameter of the sleeve by about 0.4% to about 1.2%.

12. (Previously Presented) The method of claim 10 wherein the curable precursor resin comprises a GAP resin and a cross-linking agent.

13. (Previously Presented) The method of claim 12 wherein one or both of the oxidizer component and the fuel component is present as, respectively, a pulverulent oxidizing material and a pulverulent fuel.

14. (Currently Amended) The method of claim 13 wherein the ~~oxidizing material~~ oxidizer component is present in an amount of about 0.25% to about 2% of the delay composition, by weight.

15. (Currently Amended) The method of claim 13 wherein the fuel component is present in an amount of about 0.25 to about 2% of the delay composition, by weight.

16. (Previously Presented) The method of claim 10 wherein the curable precursor resin comprises at least about 20% DPEHA.

17. (Previously Presented) The method of claim 16 wherein the curable precursor resin comprises from about 20% to about 40% DPEHA.

18. (Previously Presented) The method of claim 17 wherein the curable precursor resin comprises at least about 29% DPEHA.

19. (Previously Presented) An initiator comprising:
a shell having a closed end and an opening for a signal transmission tube;
an output charge in the closed end of the shell;
a signal transmission fuse secured in the opening; and
a timing element in the shell situated to be initiated by the fuse and to initiate the output charge,
wherein the timing element comprises a solid core of cross-linked reactive polymeric material and, optionally, one or both of a fuel component and an oxidizer component dispersed within the reactive polymeric material.

20. (Previously Presented) The initiator of claim 19 wherein the solid core of reactive polymeric material is encased in a sleeve.

21. (Original) The initiator of claim 19 or claim 20 wherein the reactive polymeric material comprises a GAP material.

22. (Previously Presented) A method for making a delay initiator, comprising disposing an output charge in an initiator shell, depositing a curable precursor resin of a reactive polymeric material into the initiator shell, cross-linking the curable precursor resin in the shell to provide the reactive polymeric material as a solid core of the material, and securing an initiation means in the shell in initiating relationship with the reactive polymeric material.

23. (Previously Presented) The method of claim 22 wherein the curable precursor resin comprises a GAP resin and a multi-functional dipolarophile cross-linking agent.

24. (Original) The method of claim 23 wherein the initiation means comprises a shock tube.

25. (Previously Presented) A method for making a delay initiator, comprising disposing an output charge in an initiator shell having an interior surface, cooling a timing element comprising a solid core of cross-linked reactive polymeric material optionally having one or both of a fuel component and an oxidizer component dispersed within the reactive polymeric material, the cooling being carried out under conditions to reduce the diameter of the timing element to a size that facilitates insertion of the timing element into the shell, inserting the cooled timing element into the shell, securing a signal transmission tube in the shell in initiating relationship with the timing element, and permitting the timing element to warm to ambient temperature so that it expands to engage the interior surface of the shell.

26. (Previously Presented) The method of claim 25 further comprising securing an initiation means between the signal transmission tube and the timing element, and wherein the initiation means comprises an SCB.

27. (Previously Presented) A timing element comprising a segment of a solid core of reactive polymeric material optionally having one or both of a fuel component and an oxidizer component dispersed within the reactive polymeric material, the segment having a length of about 0.635 cm to about 10 cm and a diameter of about 0.0625 cm to about 0.635 cm.